

**Rebuild Hawaii Consortium Meeting
December 1, 2004
HEI Training Room, 8th floor
American Savings Bank Building, Alakea and S. King Sts.
Honolulu, Hawaii**

Notes

*You can find copies of these notes and presentations on the Internet at
<http://www.hawaii.gov/dbedt/ert/rebuild/news.html>.*

Attendees:

Central Pacific Reps—Matt Snow
CH Guernsey—Scott Bly
City & County of Honolulu—Allyn Lee
County of Hawaii—Ray Carr, Clyde Young, Steve Bolles (Consultant)
County of Kauai—Glenn Sato
Department of Business, Economic Development & Tourism (DBEDT) – Liz Raman
Department of Education—Ray Minami,
Division of Consumer Advocacy—Brysen Poulton
Eco-Lite—Tom Brennan
Energy Analytics—Rich Fall
Hawaiian Electric Company, Inc. (HECO) —Sam Nichols, Derek Sonoda
IES Hawaii Chapter—Howard Wiig
Johnson Controls, Inc.—Mike Chang
Kauai Island Utility Cooperative (KIUC)—Ray Mierta
Malama Learning Center – Pauline Sato
Marine Corps Base Hawaii—John Dunbar
Maui Montessori School—Cynthia Winans-Burns
Pacific Solar Tech—Rod Brewer
Seagull Schools—Chuck Larson
Sustainable Honolulu—Steve Holmes
The Gas Company—Steve Golden, Charlie Senning
Tower Design Group—Michael Krijnen
Trane Company—Bob Hann, Rob Bellizi, Danny Fujikawa
U.S. Department of Energy Pacific Liaison—Eileen Yoshinaka
University of Hawaii, Community colleges—Dien Truong
University of Hawaii School of Architecture—Steve Meder
Williams, Sarah Ching

WELCOME AND INTRODUCTIONS

Steve Golden, Vice-President, welcomed the group and spoke about the objectives of this meeting. He introduced Malama Learning Center as the newest Rebuild America Partner.

Sam Nichols, HECO, reported that during the week of October 25-29, many opportunities for energy training were offered in Honolulu as part of the 2004 Efficient Electro-Technology Exposition and Conference, sponsored by Hawaiian Electric Company, the State of Hawaii Department of Business, Economic Development, and Tourism, and others. The Expo itself, held on Oct. 27-28, featured a tradeshow with over 60 vendors as well as numerous workshops and seminars covering subjects such as zero energy use buildings, building commissioning, HVAC renovation projects, the LEED building rating system, recycling, lighting, fuel cells and distributed generation. Six hundred thirty-five people attended

the Expo. Special half-day sessions on the Energy Star Cash Flow Opportunity Calculator for Buildings, Building Integrated Photovoltaics, and other topics were held prior to the Expo, to allow more comprehensive training opportunities.

Johnson Controls, Inc. (represented by **Michael Chang**) and **Trane Inc.** (represented by **Rob Bellizzi**) were recognized as Rebuild America Premier Business partners. They commented on the status of their industry. Chang mentioned the increasing role of web-based technologies and Bellizzi indicated that Trane's focus was more on reducing costs in HVAC operation. Chillers used to use 73% of the energy in the 70's---now auxiliaries, including cooling towers, account for more than 50% of energy use. There is a need to program microprocessors, how best to control increasingly complex systems. Operational personnel often don't have enough expertise, so much training is needed.

REBUILD HAWAII CONSORTIUM PROJECTS

Steve Meder, University of Hawaii at Manoa School of Architecture, spoke about the new **Center for Smart Building OR IS IT SMART GROWTH and Community Design**, funded by Sea Grant. The aim is to provide outreach using university resources on campus and working with community groups in other arenas. The focus is not just on buildings, either, but on all sustainability aspects including shoreline impacts and changes.

Chuck Larson gave an interesting overview of the **Seagull Schools** project to build two day-care centers for children 18 months to 5 years. Conceptual design for the centers has been developed and shows energy savings of 57% over the baseline from:

- Water heating from instant-on heaters
- New lighting technology
- Light shelves and skylights to increase day lighting in classrooms
- Classrooms cooled with natural ventilation

In addition water usage will be reduced by 60% as a result of connecting the irrigation system up to a non-potable water source, following a model at the Kapolei preschool.

Cynthia Winans-Burns, **Montessori School of Maui**, reported on the progress of their project to develop **Sustainable Design and Operational Guidelines** to define the parameters of their sustainable campus expansion. The guidelines are meant to serve as a design template for Montessori School of Maui as well as other schools seeking to integrate educational philosophy and sustainable design principles.

Clyde Young, **Hawaii County Department of Water Supply (HDWS)**, and **Steve Bolles**, consultant, updated the Consortium on the HDWS' Energy Program. The program focused on developing easy-to-use tools and procedures to help maintain pump efficiency, track pump station energy use and savings, and provide demand curtailment procedures to take advantage of the cost savings available through utility rate schedule riders

Pauline Sato, **Malama Learning Center**, described the partnership project that the Nature Conservancy and Kapolei High School are undertaking to create a learning center that integrates environmental awareness and stewardship with the arts. She spoke about the architect selection process and some of the potential design elements. The Center's architect, Eight Inc. of Honolulu, was selected in an international competition. There were 230 entries from 36 countries and 28 states.

Charlie Senning, **The Gas Company**, presented an update on the **Gas Technology Institute's Sustainable Urban Development Project** that would involve feasibility studies at the City and County of Honolulu and the University of Hawaii at Manoa.

Glenn Sato provided an update on the **Niihau Schools Project**. He described how the initial objective to provide a PV system for the school grew to encompass several other sustainable elements such as compost toilets and refrigeration. A \$25,000 grant for the installation of the PV system was provided by the U.S. Department of Agriculture. The focus of the project is on food preservation and improved nutrition for the students.

Ray Mierta, Kauai Island Utility Cooperative, gave an overview of KIUC's residential Demand Side Management program lasting from 1998-2003. He also outlined a number of residential program offerings that being developed by KIUC under a cooperative structure. He reported on the progress of the solar survey that is being sponsored by KIUC and MSRI.

GUEST SPEAKER

Darren Ishimura, HECO, outlined HECO's current strategy and future elements of their strategic energy plan. Some of the poptential elements that they are currently implementing and/or investigating include windmills, hydrogen fuel cells, bio fuels, and hydro and wave-energy.

NEW TECHNOLOGIES

Matt Snow introduced a new technology dimming ballast that could be useful in the design of buildings incorporating daylighting.

Tom Brennan introduced several new solar lighting technologies, including solar-powered security light fixtures, hazard light, and high powered intensity light.

THANKS to Ray Carr and Cynthia Winan-Burns for their contribution to these notes.